

A crossbar structure for use in a multi-processor computer system to connect a plurality of processors to at least one shared resource. The crossbar structure comprises for each processor, a storage location for receiving from a respective processor a memory address of a lock control structure associated with the shared resource. When the processor needs to acquire a lock thereto, the crossbar structure, on behalf of the processor, performs memory operations on the lock control structure at the address specified in the storage location in order to acquire the lock on behalf of the processor.

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